



New York State Testing Program

Mathematics Book 2

Grade **8**

March 13–17, 2006

Name _____





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TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Be sure to read carefully all the directions in the test book.
- You may use your tools to help you solve any problem on the test.
- Read each question carefully and think about the answer before writing your response.
- Be sure to show your work when asked. You may receive partial credit if you have shown your work.
- Use your calculator to help you solve the problems on this part of the test.



This picture means that you will use your ruler.

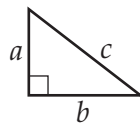


This picture means that you will use your protractor.

Mathematics Reference Sheet

FORMULAS

Pythagorean Theorem



$$c^2 = a^2 + b^2$$

Simple Interest

$$I = prt$$

Distance Formula

$$d = rt$$

CONVERSIONS

Temperature Conversions

$$F = \frac{9}{5}C + 32$$

$$C = \frac{5}{9}(F - 32)$$

Measurement Conversions

$$1 \text{ mile} = 5,280 \text{ feet}$$

$$1 \text{ yard} = 3 \text{ feet}$$

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Tai went to a shopping mall. He spent \$25.75 on a shirt, \$15.49 on a hat, and \$9.95 on a poster, before tax. Tax was 8.25% on all purchases. What was the total cost of Tai's purchases, including tax?

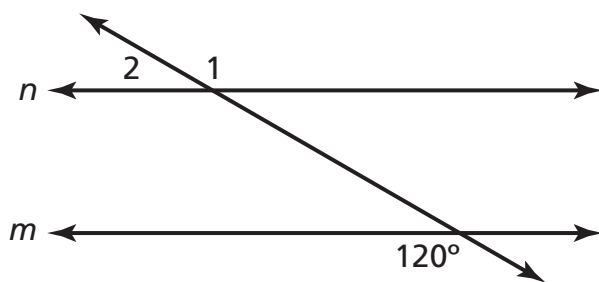
Show your work.

Answer \$ _____

Go On

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In the diagram below, lines n and m are parallel.



[not drawn to scale]

Part A

What is the measure, in degrees, of $\angle 1$?

Answer _____ degrees

On the lines below, explain how you determined the measure of $\angle 1$.

Part B

What is the measure, in degrees, of $\angle 2$?

Answer _____ degrees

On the lines below, explain how you determined the measure of $\angle 2$.

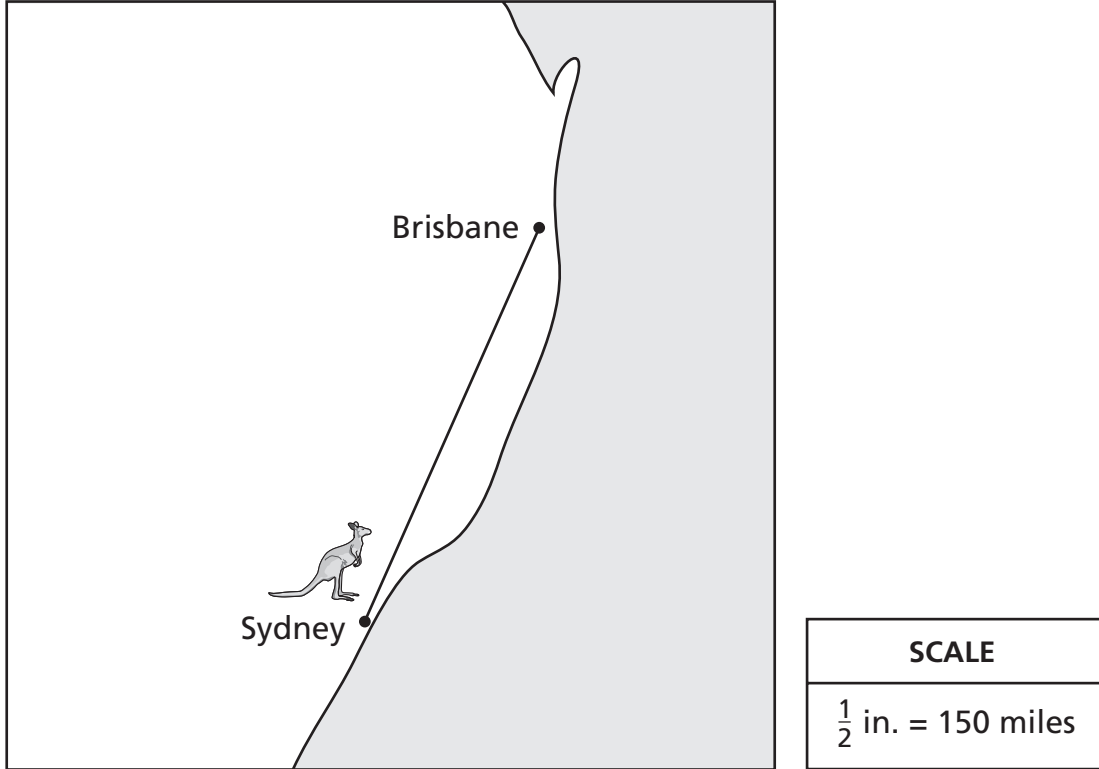
Go On

30



Use your ruler to help you solve this problem.

A kangaroo named Skippy travels from Sydney to Brisbane. Based on the scale drawing below, what is the distance, in miles, Skippy travels?



Show your work.

Answer _____ miles

31 Solve for x in the equation below.

$$2(3x - 4) - 7 = 3x + 1 + x$$

Show your work.

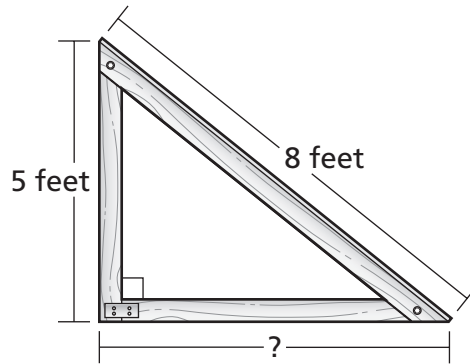
Answer _____

On the lines below, explain how to use the distributive property to help you solve this equation.

Go On

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Tyrone is building a skateboard ramp with a piece of plywood that is 8 feet long. He wants the height of the ramp to be 5 feet.



[not drawn to scale]

To make a strong ramp, the base must form a right angle with the back of the ramp. What will be the length of the base rounded to the nearest tenth of a foot?

Show your work.

Answer _____ feet

33Complete the function table below with the missing values for y .

x	y
1	3
2	7
3	11
4	15
5	
6	

Based on the function table, write a function rule that shows the relationship between x and y .

Answer _____

STOP

Place Student Label Here



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